

Lecture 28

Intellectual Property



Industrial
Economics

The value of information

- ★ There is major tension between **intellectual property** and **technology**

"On the one hand, information wants to be expensive, because it's so **valuable**. The right information in the right place just changes your life.

On the other hand, information wants to be free, because the **cost** of getting it out is getting lower and lower all the time.

So, you have these two **fighting against each other**."

Stewart Brand, 1984.

An institutional issue

- ★ Intellectual property is protected by **laws**
laws **lag behind** technology
- ★ IP protection is a **complicated** issue
- ★ Consider the **rights** on a **song**
 - ◆ In the 1800s, when **no recording** was possible
 - ◆ In the 1900s, when one could **record** it in media
 - ◆ In the 60's, when the media could be **copied** by the end user
 - ◆ In 2000, when the media could be **transmitted massively**
 - ◆ In 2010, when the media lost its **physical form**
 - ◆ In 2015, when the media lost its **physical presence**
 - ◆ In 2050, songs will come ...

The intellectual property problem

Incentivize and **promote** the production of creative works

while at the same time

Maximize the social benefit by **sharing the information** to as many as possible users

- ★ The law's impossible task is to **strike a balance** between those two contradicting goals
- ★ IP is only going to become **more and more relevant** as our lives become **more and more digital**.

IP is everywhere

- ★ There is a **copyright** watermark on these very slides
- ★ The software projecting them is a registered **trademark**
- ★ The screen and the projector manufacturers probably hold several **patents**
- ★ HSE perhaps has legitimate **claims** on the very **material** I have created for this lecture
which I put together reading from various **copyrighted** sources
- ★ I can't create products that **resemble**



IP protection is not straightforward

- ★ It is **natural** for the concrete, tangible, or physical embodiments to be protected by **common law**
- ★ "if you wouldn't steal a **car** why would you steal a **movie**?"
 - If I could steal cars and the owners would still have their cars, I would everyday steal one!
- ★ But non-tangible, non-physical creations require **costly inputs**, too.

IP is not clear-cut

- ★ Can I reproduce a part of someone else's **paper**?
- ★ Can I copy for my own use a few pages of a **book** that I own?
- ★ Can I transfer a **song** from a CD I own to my phone?
- ★ Can I **play** that song at a party?
- ★ Can I **use a picture** of someone without their permission?
- ★ Can I even post a picture of myself with a registered design in the **background**? _

Definition of IP

- ★ Non-physical property that stems from **an idea**
- ★ Apart from all other production factors there has to be some **element of novelty**
IP cannot be **commonplace**, generally **known** or **obvious**
- ★ IP covers the **idea**; it does not cover the **problem** or the **need** that the idea attempts to solve _ _

Copyright

- ★ The law of copyright relates to the '**right to copy**' protected works
- ★ Copyright law is **territorial**
we will cover principles that are **international commonplace**
- ★ The **first copyright legislation** was in England in 1709 the **Statute of Anne** was the first law to grant ownership rights to individual authors rather than to publishers or printers
- ★ The first **American constitution** mentioned copyright
congress was given the power to assign **limited monopoly** to authors and inventors to promote creation and innovation. _

Eligibility for Copyright protection

Copyright

- ★ Copyright law protects works of **authorship originality**
extends to **parts** of the work that **originate** to the creator
- ★ **Not covered** by copyright
titles, names, designs, slogans, fonts, ingredients, contents
- ★ **Covered** by copyright
literature, music, sound, dramatic work, pantomime, choreography, pictorial representations, photography, sculptures, motion pictures and architecture
- ★ **Expressions** are copyrightable; **facts** are not. _

Equal coverage

Copyright

- ★ Copyright covers even a **minimal added creativity**
- ★ The promotion of **science** or **art** or **intellect** is not required for copyright
lawmakers, judges and jurors are not suitable to **decide** which creative works **promote progress** and which ones are **trivial**
- ★ There is **equal coverage** for **any** type of work
from literary masterpieces and breakthrough scientific research, to pornography
- ★ **The system** of copyright promotes the progress; not the **individual works**. _

Where stands the copyright?

Copyright

- ★ Copyrightable works must be fixed in any **tangible medium of expression**
that is, the idea must be able to be **perceived** and **transmitted** in a form of a **copy**
- ★ However, the copyright extends to the **in-tangible work**, not to the **physical copy**
you may own a **copy of a song** but you do not own the **copyright**
- ★ The copyright laws **do not protect** an idea **prior to** its transfer on a tangible material. _

Who is entitled to the copyright?

- ★ **Ownership** initially goes to the **creator** with **exceptions**:
 - ◆ If the creator is **non-human**, copyright goes to the owner of the producing entity
 - ◆ If the work is created by the **government**, there is no copyright
 - ◆ If the **creator is hired** for the production of this work, the copyright goes to the employer
 - ◆ If the work was created **using someone else's resources**, the owner of the resources **may have** claims on the copyright
- ★ Contracts usually **clarify** the exact **copyright** and **royalty** relationships between parties
 - crowd-funding, sponsorships, scientific research, R&D

Exclusive rights

The **owner** of the copyright is entitled to the following rights:

1. Reproduction right: **copy** the work for commercial use
2. Adaptation right: **transform** the work into another form or language
3. Distribution right: **sell, lease, rent or lend** the work
4. Public performance right: **perform** the work live commercially
5. Display right: **display** the work commercially in public view
6. Digital transmission right: **broadcast** the work with **digital means**

Assignment and duration

- ★ Copyrights are assigned instantly and automatically upon creation
 - works **need not be registered** for copyright protection
- ★ **Personal copyright** lasts for **70 years** after the death of the author
- ★ **Corporate copyright** lasts for **95 years** from publication

Exceptions

There are **three exceptions** to copyright protection:

1. **Distribution** of physical media
 - ◆ Works purchased on **physical media**, come with the **distribution right** for that **particular media**
 - ◆ Works bought in **digital form** come with no **distribution rights**
2. **Compulsory licensing** of digital media
 - ◆ Certain types of works can be used in certain ways **without permission** as long a law determined fee is paid to the owner
3. **Fair use**
 - ◆ **Limited use** of copyrighted material for commentary, search, criticism, parody, news reporting, research or scholarship

Patents

- ★ A grant by the state allowing an inventor to maintain a **monopoly** on the use and development of an invention
 - for a **limited time** in exchange for **detailed public disclosure**
- ★ In terms of economic impact, the patent law is arguably the **most important branch** of intellectual property
- ★ The **first recorded** patent law was in Venice in 1474
 - "if provision were made for the works and devices discovered by men of great genius, so that others who may see them could not build them and take the inventor's honor away, more men would then apply their genius to discover and build devices of great utility and benefit to our commonwealth"*

Types of patents

There are **3 types** of patents issued by the Patent & Trademark office:

1. **Utility patents** (20 years + 5 years for medical)
 - refer to the **function** of an invention
2. **Design patents** (14 years)
 - refer to the **appearance** of an invention
3. **Plant patents** (20 years)
 - refer to the **modification of a plant** that is reproduced asexually, by grafting or cloning

Requirements for a utility patent

1. **Inventiveness**
the invention must be the result of *human creation* - *natural* or *abstract* or *preexisting* phenomena cannot be patented
2. **Usefulness**
it has some *identifiable benefit* and that it's capable of being used by a person of ordinary skill in the field – *can be made*
3. **Novelty**
a similar invention has *not already been done*
4. **Non-obviousness**
should not be *obvious* to a person of ordinary skill in the art
5. **Enablement**
the application shall contain a *written description* to enable any person skilled in the art to recreate the invention. . .

Trade secrets

- ★ **Patents** have an *expiration date* and have to be *disclosed*
trade secrets have *neither*
- ★ **Anything of value** to a company can be a trade secret
customer lists, business plans, formulas, algorithms
- ★ Trade secrets **cannot be registered**
you simply know them and you hope others don't
- ★ They are **protected** by law under three **requirements**:
 1. There exist *records* of the trade secret
 2. The *idea* was originated at the claimant
 3. The claimant took sufficient *steps to protect* it
- ★ **Non-disclosure agreements** protect such assets. . .

Trademarks

- ★ A trademark is a recognizable concept which *carries meaning* and *identifies* products of a particular origin
- ★ It can be a *name, expression, sign, shape, design or pattern, color, sound, smell*



Rationale

- ★ The rationale for granting legal protection for trademarks is that they are a *type of property*
 - ◆ Companies *spend resources* to develop their brand names
 - ◆ They signify *quality, support* and *trust* for the consumer
- ★ Trade marks prevent **consumer confusion**
 - ◆ Make it *easier* for consumers to *recognize* goods and services
 - ◆ Make it *harder* for competitors to *counterfeit* trademarked products. . .

Registration

- ★ **Unregistered** trademarks: brand™
the user *simply asserts* usage of the trademark
- ★ **Registered** trademarks: brand®
the name is registered, recorded and can be awarded *damages*
- ★ Registration has to be **renewed** every 5 years
can last *forever*. . .

Requirements

1. It must be **distinctive** beyond the product's functionality
you cannot register the *color of Evian® water* or the *shape of pizza* (I can register my *banana bottle™*)
2. It must have **commercial purpose**
you cannot register a *scientific term* or an *ideology*
3. It must be **descriptive beyond commonality**
you may register the word "Apple" for an IT company but not for a company that sells apples. . .

Use of a registered TM

- ★ You **cannot** use a registered trademark when it is **reasonably expected to cause confusion** to consumers for example "BMW service", "HP ink", "Apple accessories"
- ★ It is **OK** to use logos when you **refer** to the TM owner and no confusion (beneficial to you) can occur for example "The Polaroid case", "Independently operated service for BMW", "HP-compatible ink"
- ★ The owner **can always sue** but **the court will examine**
 - ◆ The **intent**
 - ◆ The actual **possibility of confusion** (size or wording matter)
 - ◆ The **potential for damage** from confusion (not from reference)



International IP protection

- ★ IP rights are **territorial**
- ★ International IP treaties set up **ground rules** for international protection
WIPO, TRIPS, WTO
- ★ The most important **minimum standard** is that protection should **not depend on nationality** of the interest
- ★ Countries have **incentive to join** these treaties to foster international **trade**
 - ◆ Companies **avoid** serving markets without IP protection
 - ◆ However, **selected non-enforcement** is common in **developing countries**

7 Interesting facts about IP



*Protection

Trademarks

Trademark registration ensures protection from two **sources of risk**:

1. Dilution by **blurring**
the same or similar brand name is used in a **different industry** by another user with the purpose of **acquiring recognition**
2. Dilution by **tarnishment**
a similar brand name is used by another user and may cause **damages to the reputation** of the brand name

*WIPO

International IP

- ★ The World Intellectual Property Organization (WIPO) was created in 1893 after the Berne Convention to encourage creative activity, to promote the protection of intellectual property **throughout the world**
- ★ In 1967, WIPO became one of the 17 specialized agencies of the **UN**
- ★ Currently has **189 member countries** and is headquartered in Geneva
- ★ The most important **limitation** of WIPO is that it does not have **enforcing power** if a nation violates a treaty some issues go **through WTO** that has such power

***TRIPS**

- ★ The **agreement** on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement between **WTO nations** signed in 1994
- ★ It sets **minimum standards** for the regulation by national governments of many forms of IP
- ★ It **internationalized trademarks**
- ★ It protected **geographical indications**
champagne, feta cheese, Greek yogurt, Cuban cigars, Swiss chocolate

***DMCA**

- ★ The **Digital** Millennium Copyright Act is a **US law** signed in 1998 with **international influence**
- ★ The DMCA sets out **safe harbors** to protect internet organizations from **unreasonable liability** in four **cases**:
 1. When they are **mere providers** of internet signal (ISPs)
 2. When they are **caching information** (Google, Facebook)
 3. When they are **mere hosts** of user content (YouTube, dropbox)
 4. When they **index content** (search engines)
- ★ Safe harbors have to **block** or **remove** infringing content that **become aware of**

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WARNING

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